

## CLAIMS

### What is claimed is:

1. A multi-channel matrix decoder module, comprising:
  - a input mixer that produces a plurality of input signal pairs; and
  - a matrix decoder coupled to the input mixer that produces a plurality of output signals as a function of the input signal pairs.
2. A method for decoding multi-channel audio signals, comprising:
  - creating at plurality of input signal pairs as a function of three or more input signals;
  - and
  - creating a plurality of output signals as a function of the plurality of input signal pairs.
3. A surround processing system, comprising:
  - a multi-channel matrix decoder module that produces a plurality of output signals; and
  - an adjustment module that produces a plurality of adjusted output signals.
4. A vehicular multi-channel sound processing system, comprising:
  - a multi-channel matrix decoder module that creates a plurality of output signals; and
  - a plurality of speakers that receive the plurality of output signals.